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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,115

09/19/2003

LeNoir E. Zaiser

2173.2004-001

8421

59242 7590 10/16/2009  
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EXAMINER

SCHNEIDER, CRAIG M

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

10/16/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,115	<b>Applicant(s)</b> ZAISER ET AL.	
	<b>Examiner</b> CRAIG M. SCHNEIDER	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,7-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 5, 7-18, 24, 25, and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I in the reply filed on 5/28/08 is acknowledged.
2. Claims 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/28/08.
3. Claims 24-26 and 30 were previously restricted on 3/21/06. The examiner is rejoining claims 24, 25, and 30 because the apparatus claims of claims 7, 12, and 27 are not distinguishable from the method claims.
4. The claims that will be examined in the office action are 2, 4, 5, 7-18, 24, 25, and 27-30.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 2 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The at least 16% of the surface area does not have support in the originally filed application. The originally filed application states

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“about 17%”. The term at least 16% encompasses everything above 16%. The specification disclosed about 17% which would include a percentage a little higher than 17 and a little lower than 17 but would not include 85% which is included by “at least 16%”. Please change the language from “at least 16%” to --about 17%--. Per the remarks filed on 7/13/09, there is support for about 40% per the disclosure of Figure 4 on page 9, lines 26-27.

***Claim Rejections - 35 USC § 102***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 2, 7, 10-13, 17, 18, 24, 25, and 27-30 are rejected as understood under 35 U.S.C. 102(b) as being anticipated by Chaney (3,285,261).

Chaney discloses a pneumatic differential pressure valve to supply a quantity of a medium in response to an inhalation breath comprising a nozzle (27) in communication with a pressurized supply (25) of a medium and having a head (26) for delivering the pressurized supply of the medium to a delivery outlet(5); a control chamber (20') capable of being pressurized and then depressurized in response to an inhalation breath; and a diaphragm (19) disposed between the nozzle head and the delivery outlet and controlled by pressure in the control chamber, wherein the diaphragm pneumatically seals the nozzle head when the control chamber is pressurized and pneumatically releases from the nozzle head in response to a reduction in pressure in the control chamber, and wherein the surface area of the nozzle head in contact with the diaphragm is computed so that the diaphragm pneumatically releases

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from the nozzle head in response to the inhalation breath without mechanical assistance col. 2, line 3 to col. 3, line 62).

Regarding claims 2 and 10, the surface area of the nozzle head is at least 17% of the surface area of the diaphragm in contact with the control chamber as can be seen in Figure 2.

Regarding claim 11, the control chamber of Chaney is capable of being pressurized to at least about 22 psi.

Regarding claim 12, the gas reservoir for the supply gas is attached to the threaded section 25. The timing gas chamber is the control chamber (20').

Regarding claim 27, the pilot valve (35) operates in response to an inhalation breath.

Regarding claims 24, 25, and 30; the method claims are anticipated by the apparatus of Chaney.

Regarding claims 17, 18, 28, and 29; per Figure 2 in Chaney the ratio of the opposing pneumatic forces would be less than 1:2.4 and further would be less than 1:2.

### ***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 4, 8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. (4,363,424).

Chaney discloses a filter (17) located in the oxygen channel that leads to the nozzle/diaphragm interface as can be seen in Figure 2. Chaney fails to disclose that

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the filter is located at the interface of the nozzle and diaphragm. Holben et al. disclose a filter (162) located in a nozzle section (152) that interfaces with the valve structure (98)(col. 9, line 37 to col. 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the location of the filter as disclosed by Chaney to be at an interface of the nozzle and the valve as disclosed by Holben et al., since the changing of the location of the filter would not alter the function of the device.

11. Claims 5, 9, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. as applied to claim 4 above, and further in view of Danon (5,348,001).

Chaney in combination with Holben et al. disclose all the features of the invention except that the filter has a porosity of 20 micrometers and is made of sintered bronze. Danon disclose utilizing a filter (12) that has a porosity of 20 microns (col. 5, lines 9-11) and is made of sintered bronze (col. 4, line 66 to col. 5, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a 20 micron filter as disclosed by Danon in place of the filter of the combined device of Chaney and Holben et al., in order to filter the air to 20 microns.

Regarding claim 16, it would have been obvious to one of ordinary skill in the art to utilize sintered bronze material as disclosed by Danon with the filter of the combined device of Chaney and Holben et al., in order to utilize a commonly available filter material.

***Response to Arguments***

12. Applicant's arguments filed 7/13/09 have been fully considered but they are not persuasive. The applicant is arguing that the diaphragm of Chaney does not pneumatically seal the nozzle head when the control chamber is pressurized. The examiner disagrees and asserts that as the pressure increases in chamber 20' the diaphragm 19 pneumatically seals the nozzle head 26 from allowing air to proceed to outlet 5 and conversely when the pressure decreases in chamber 20' the diaphragm 19 will allow air to proceed to the outlet 5 as disclosed by Chaney (col. 3, lines 22-43). The orifice 30 does not prevent the valve from performing the claim limitations of sealing the nozzle head, since the chamber is still being pressurized and seals the nozzle head from allowing air to proceed to the outlet.

13. The applicant is further arguing that the Holben et al. reference fails to disclose that the filter is positioned at the interface of a delivery nozzle and diaphragm as required per the claim language. Chaney discloses the use of a filter in the pathway but does not disclose the filter being located at the interface of the nozzle and diaphragm. Holben et al. disclose the use of a filter at the interface of a nozzle and a valve element therefore per the teaching of Holben et al., the filter element of Chaney is being relocated to the interface of the nozzle and the diaphragm as stated above.

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. S./  
Examiner, Art Unit 3753  
October 6, 2009

/Robin O. Evans/  
Supervisory Patent Examiner, Art Unit 3753